REMARKS

Reconsideration of this patent application is respectfully requested in view of the foregoing amendments, and the following remarks.

The amendments to this patent application are to amend claim 15 to recite that the fine filaments and the coarse filaments are each anchored exclusively mechanically, whereby both of these filaments are curled. From claim 23, the recitation that the fine filaments have a titer of from 0.05 to 6.7 dtex was added to claim 15. This terminology was then cancelled from claim 23.

The applicants comment upon the prior art rejections of the claims, as follows.

The present invention has as an object, the inventive concept of making it superfluous to glue the pile filaments to the textile carrier structure by means of a binder. This is because the mechanical anchoring of the pile filaments in the carrier structure is unexpectedly improved, according to the claimed invention.

This object is accomplished according to the present invention in that the multi-filament yarn in the textile carrier structure contains both mechanically anchored fine filaments as well as course filaments mechanically anchored in the textile carrier structure, the titer of which is more than 25 times as great as the titer of the fine filaments.

In order to high light the differences over the prior art, it should be emphasized at this point that the pile filaments are anchored in the textile carrier structure exclusively mechanically. The exclusively mechanical anchoring of the pile filaments is also supported by the fact that both the fine and the coarse filaments are additionally curled. The curling of the fine and coarse filaments has the result that the filaments not only lie smoothly on one another, but rather are hooked together by means of a positive lock. The hooking by means of curling makes it more difficult to loosen or pull out the filaments from the pile layer.

In contrast to this, the prior art filaments are merely twisted in the reference *U.S. Patent No. 6,057,023 (Shimono et al.)*, whereby mechanical anchoring of the pile filaments in the textile carrier structure is only possible up to a very limited degree. Because of the absence of curl, the prior art filaments

lie smoothly on one another and do not have sufficient adhesion to one another. The result is that the prior art filaments can easily be loosened or pulled out of the pile layer. For this reason, the latex coating that is usual for tufting carpets has to be applied, in order to more strongly anchor the prior art pile filaments in the textile carrier structure.

Accordingly, the present invention is furthermore not anticipated in any way and not rendered obvious, by the prior art reference. This is because of all of these limitations which are recited by amended claim 15, as follows:

> "wherein all or part of the pile filaments (3) consists of a multi-filament yarn that contains fine filaments (4) anchored in the textile carrier structure exclusively mechanically, on the one hand, having a titer of 0.05 to 6.7 dtex, and coarse filaments (5) anchored in the textile carrier structure exclusively mechanically, on the other hand, having a titer that is more than 25 times greater than the titer of the fine filaments (4), whereby both the fine filaments (4) and the coarse filaments (5) are curled."

The present Specification, on page 3 in the top paragraph thereof, discusses the claimed inventive concept, as follows. Due to the fact that the coarse and the fine filaments are twisted with each other in the pile threads, particularly durable anchoring of the pile threads in the textile support structure is obtained in spite of the high stiffness of the individual pile threads, whereby the textile support structure may be present in the form of fabrics or knitted textile materials. Especially the fine filaments, which are closely joined with the coarse filaments, effect particularly solid anchoring and clamping in the textile support structure.

The above defined present invention is more clearly distinguishable from *Shimono* based upon the *Shimono* disclosure from column 3 line 50 to column 4 line 15 as follows:

"FIG. 1 is a vertically sectional partial view of a mat of *Shimono*. FIG. 2 is a schematic view showing a state of a pile yarn of FIG. 1. FIG. 3 is an enlarged partial view of the pile yarn. A pile yarn 1 comprises a twist yarn formed by twisting two temporary twist yarns 11 as shown by FIG. 3. The temporary twist yarn 11 is formed by twisting a paralleled yarn 111 comprising a great number of BCF nylon single yarns and one nylon monofilament single yarn 112. In the mat of this embodiment, the

entire pile yarn on the mat surface is composed of the pile yarn 1."

"The mat having the foregoing structure is manufactured in the following manner. In the first stage, one paralleled yarn 111 is formed by summarizing sixty eight BCF nylon single yarns. This one paralleled yarn 111 and one nylon monofilament single yarn 112 are subjected to a first twist respectively, and the both are subjected together to a final twist to form one temporary twist yarn 11. Another one temporary twist yarn 11 is also formed in the same manner."

"In the second stage, the two temporary twist yarns 11 are subjected to the first twist respectively, the both are subjected together to the final twist and thermally set by wet heat at 120-140° C. for one to five minutes. The final twisting state is shown in FIG. 3. The pile yarn 1 comprising the twist yarn is prepared by this process."

"In the next stage, the pile yarn 1 is tufted onto a base cloth 2 by a tufting machine, the entire or a part of it is subjected to a cut piling, and then the pile yarn 1 is fixed by a bonding agent such as a latex 4, onto a non-piled surface of the base cloth 2. The pile yarn 1 tufted onto the base cloth 2 is

secured to a rubber sheet 3. The mat of FIG. 1 is prepared by this process."

The *Shimono* fails to teach or to suggest "exclusively mechanically anchoring" of the fine and coarse filaments, both of which are "curled".

With regard to the dependent claims, it should be noted that they represent advantageous embodiments of the amended claim 15, in that they have curled filaments as their object, whereby the fine and coarse curled filaments are anchored in the textile carrier structure exclusively mechanically.

For all these reasons, all the pending claims 15 to 28 as amended, and the present invention are not anticipated under 35 U.S.C. 102, but are patentable under 35 U.S.C. 103 over all the prior art of record. A prompt notification of allowability is respectfully requested.

Respectfully submitted,

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Enclosures: 1- Petition Two Month Extension of Time Small Entity
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I hereby certify that this correspondence is being deposited with the U.S. Postal Service as first class mail in an envelope addressed to: Commissioner of Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on May 11, 2004.

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